

In the Claims:

Claim 1 (currently amended). A bearing assembly comprising at least one foil bearing including at least one foil member positioned to face a rotor portion for relative rotational movement there between for bearing the rotor and at least one resilient member for resiliently supporting said foil member, at least one magnetic bearing, means for sharing load between said foil and magnetic bearings at rotor operating speeds, said load sharing means comprising a controller, means for sensing actual load on at least one of said foil and magnetic bearings, and means for inputting the sensed actual load to said controller for sharing effecting the allocation of load between said foil and magnetic bearings at respective rotor operating speeds.

Claim 2 (original). A bearing assembly according to claim 1 wherein said actual load sensing means comprises at least one strain gage attached to said resilient member.

Claim 3 (original). A bearing assembly according to claim 1 wherein said actual load sensing means comprises at least one plurality of temperature sensors spaced circumferentially of said foil bearing.

Claim 4 (original). A bearing assembly according to claim 1 wherein said actual load sensing means comprises at least one flux sensor for sensing flux of said magnetic bearing.

Claim 5 (original). A bearing assembly according to claim 1 further comprising at least one accelerometer and means for inputting values of acceleration of the bearing assembly to the controller for use in control of the bearing assembly.

Claim 6 (original). A bearing assembly according to claim 1 wherein the bearing assembly is a journal bearing assembly.

Claim 7 (original). A bearing assembly according to claim 1 wherein the bearing assembly is a thrust bearing assembly.

Claim 8 (withdrawn).

Claim 9 (currently amended). A method for bearing a rotor comprising effecting sharing of rotor load at rotor operating speeds between a foil bearing and a magnetic bearing, said load-sharing step including sensing actual load on at least one of the foil bearing and the magnetic bearing, and inputting the sensed actual load to a controller for effecting the allocation of load sharing between the foil bearing and the magnetic bearing at respective rotor operating speeds.

Claim 10 (original). A method according to claim 9 wherein the step of sensing actual load comprises sensing strain on the foil bearing.

Claim 11 (original). A method according to claim 9 wherein the step of sensing actual load comprises sensing temperature at a plurality of locations spaced circumferentially of the foil bearing.

Claim 12 (original). A method according to claim 9 wherein the step of sensing actual load comprises sensing flux of the magnetic bearing.

Claim 13 (original). A method according to claim 9 further comprising inputting values of acceleration of the bearings to

the controller.

Claim 14 (original). A method according to claim 9 wherein the bearings constitute a journal bearing assembly.

Claim 15 (original). A method according to claim 9 wherein the bearings constitute a thrust bearing assembly.

Claim 16 (original). A method according to claim 9 further comprising outputting, in response to input of radial position of a rotor portion from a first sensor on a first side of a housing for the magnetic bearing part, a signal to a first control coil for regulating amount of flux on the first side of the housing and further comprises outputting, in response to input of rotor portion radial position from a second sensor on a second side of the housing, a signal to a second control coil for regulating amount of flux on the second side of the housing.

Claims 17 to 22 (canceled).

Claim 23 (new). A bearing assembly comprising at least one foil bearing including at least one foil member positioned to face a rotor portion for relative rotational movement there between for bearing the rotor and at least one resilient member for resiliently supporting said foil member, at least one magnetic bearing, structure for sharing load between said foil and magnetic bearings at rotor operating speeds, said load sharing structure comprising a controller, a sensor for sensing actual load on at least one of said foil and magnetic bearings, and the sensed actual load being inputable to said controller for effecting the allocation of load between said foil and magnetic bearings at respective rotor operating speeds.

Claim 24 (new). A bearing assembly according to claim 23 wherein said sensor comprises at least one strain gage attached to said resilient member.

Claim 25 (new). A bearing assembly according to claim 23 wherein said sensor comprises at least one plurality of temperature sensors spaced circumferentially of said foil bearing.

Claim 26 (new). A bearing assembly according to claim 23 wherein said sensor comprises at least one flux sensor for sensing flux of said magnetic bearing.

Claim 27 (new). A bearing assembly according to claim 23 further comprising at least one vertical accelerometer and at least one horizontal accelerometer for sensing magnitude and direction of acceleration loads of aircraft or space craft in which the bearing assembly is installed, and the bearing assembly further comprising structure for inputting values of acceleration sensed by the vertical and horizontal accelerometers to the controller for use in control of the bearing assembly.

Claim 28 (new). A bearing assembly according to claim 23 wherein the bearing assembly is a journal bearing assembly.